

**UNITED STATES DEPARTMENT OF COMMERCE****United States Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/512,669 02/24/00 JECK-FROSCH

U 32140-153023

EXAMINER

IM22/0504

Venable Baetjer Howard & Civiletti LLP
P O Box 34385
Washington DC 20043-9998

CLEVELAND, M

ART UNIT

PAPER NUMBER

1762

DATE MAILED:

05/04/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/512,669

Applicant(s)

JECK-PROSCH ET AL.

Examiner

Michael Cleveland

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11-13, 16-18 and 21-42 is/are pending in the application.
- 4a) Of the above claim(s) 1-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-13, 16-18 and 21-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____.

Art Unit: 1762

DETAILED ACTION

Claim Objections

1. Claims 11-13 and 22-24 are objected to because of the following informalities: Claims 22, 23, and 24 duplicate claims 11, 12, and 13. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 16-18, 27, 35, 39, and 42 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
Claims 16-18 are unclear because they depend from cancelled claim 10. For purposes of applying art, they have been treated as depending from claim 36.
Claims 27, 35, and 42: There is no antecedent basis for the term "the two components". For purposes of examination, the Examiner has assumed that the two components referred to are the polymer and the energetic, monomer softener.
Claim 39 is unclear because it is unclear whether "the nitric acid ester" refers to the propellant (as listed in claim 38) or the treatment composition (as listed in claim 36). For purposes of applying art, the Examiner has assumed that the claims is inclusive of either possibility.

Claim 42: The term "the polymer" lacks antecedent basis.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:
A person shall be entitled to a patent unless –
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
5. Claims 11-13, 16, 18, 21-28, and 36-42 are rejected under 35 U.S.C. 102(b) as being anticipated by O'Meara et al. (U.S. Patent 5,682,009, hereafter '009).

Art Unit: 1762

Claims 11 and 21: '009 teaches mixing (i.e., surface treating) a propellant powder in slurry with at least one polymer, such as the cellulose esters listed in col. 4, lines 1-60.

Claims 12-13 and 22-24: The propellant may be mono- or dibasic and may include nitroglycerin (col. 5, lines 8-10).

Claims 25-26, 40-41: The mixing is performed by applying the polymer in an aqueous solution (col. 5, lines 13-22) and heating the solution over time and allowing the polymer to penetrate into the propellant grains (i.e., by incubating in an impregnating solution).

Claims 16, 18, 27-28, 36-42: Nitroglycerin (which Applicant has specified as an energetic, monomer softener in originally filed claim 18) may be added prior to the addition of the polymer (to treat a monobasic propellant) (col. 5, lines 9-12). As stated above, the slurry treatment occurs in solution.

6. Claims 16-18, 36-41 are rejected under 35 U.S.C. 102(b) as being anticipated by Lutz (U.S. Patent 5,520,757, hereafter '757).

Claims 16, 36, 38: '757 teaches mixing (i.e., surface treating) nitrocellulose (a propellant powder in colloidal form) with alkyl nitrate ethyl nitramines (alkyl NENAs) (col. 3, lines 11-29).

Claim 17: The alkyl NENA may be methyl NENA (col. 2, lines 64-65).

Claims 18 and 39: The mixing composition may also include nitroglycerin (col. 2, line 65- col. 3, line 10).

Claim 37: Nitrocellulose is monobasic.

Claims 40-41: The treatment mixture may be a solution of two NENAs (col. 3, lines 47-63, Examples).

7. Claims 29-31 and 33-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Willer et al. (U.S. Patent 5,801,325, hereafter '325). (Menke et al., U.S. Patent 5,596,168, is also cited for its teaching of definitions relevant to claim 31.)

Claim 29: '325 teaches mixing (i.e. surface-treating) propellant powder (col. 5, line 64- col. 6, line 2) with a polyglycidyl nitrate polymer (col. 3, lines 10-24; col. 8, lines 36-52).

Claim 30: The propellant may be mono or polybasic (col. 5, line 64-col. 6, line 2).

Art Unit: 1762

Claim 31: The propellant may be HMX or RDX (octogen or hexogen) (col. 5, line 64-col. 6, line 2). (See Menke et al., U.S. Patent 5,596,168, col. 1, lines 13-20, which teaches that HMX and RDX are octogen and hexogen, respectively.)

Claims 33-34: The method comprises applying the polymer in solution (col. 6, lines 37-59; col. 8, lines 36-52).

Claim 35: Nitroglycerin (which Applicant has specified as an energetic, monomer softener in originally filed claim 18) may be added simultaneously with the addition of the polymer (to treat a monobasic propellant) (col. 5, lines 43-55).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Willer '325 in view of O'Meara '009.

Willer '325 teaches the method for coating propellants with binders as described above, but does not explicitly teach that the propellant may contain a nitric acid ester such as nitroglycerin.

'009 teaches that it is known to provide propellant powders containing nitroglycerin added as an energy booster (col. 1, lines 33-39). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used such a powder with the expectation of similar results or to have added nitroglycerine to the propellant powder of '325 as an energy booster.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Menke et al. (U.S. Patent 5,596,168) is cited for its teaching of alternate names of HMX and RDX (col. 1).

Art Unit: 1762

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Cleveland whose telephone number is (703) 308-2331. The examiner can normally be reached on 9-5:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (703) 308-2333. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 306-3186 for regular communications and (703) 306-3186 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

MBC

MBC

May 2, 2001



SHRIVE P. BECK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700